

Northern Kentucky University

P-12 Initiatives & Programs

Introduction

Northern Kentucky University has a long history of supporting high quality programs designed to strengthen the college readiness of the region's students and enhance the capacity of the region's school districts. The Northern Kentucky service region is home to some of the state's highest achieving districts as well as districts whose performance falls short of state averages (See Appendix I.) Collectively, NKU's P-12 efforts respond to both the highest and lowest performing districts across its service region.

The overarching response to the northern Kentucky region's educational challenges has been articulated via the Vision 2015 regional planning process. Vision 2015, along with the deep involvement of NKU, identified seven goals for achieving regional educational excellence. These included:

- ✓ Challenging students with a rigorous curriculum necessary for college readiness
- ✓ Exceeding national standards for educator excellence
- ✓ Ensuring that northern Kentucky schools have programs that lead to high paying jobs

NKU's P-12 initiatives are aligned with these goals so as to maximize regional impact.

NKU's current strategic plan includes the following strategic goals:

- ✓ Addressing degree attainment gaps for at-risk populations
- ✓ Help students identify and achieve expectations and goals
- ✓ Producing more graduates
- ✓ Aligning academic programs with talent necessary for the region's economic development, particularly careers in the STEM fields

NKU's current P-12 initiatives are informed by these strategic goals. Collectively they offer a vision of enhanced college readiness and success within the world of work.

Positively impacting college readiness requires a multi-facted approach. Research suggests that there is no one program that significantly impact college readiness. Best-practice turns on developing multiple programs and pursuing a variety of approaches. NKU's P-12 initiatives reflect this approach.

The scope and breadth of NKU's P-12 initiatives are described below. While extensive, this listing is not fully exhaustive. Faculty and staff often develop P-12 initiatives out of their professional commitments, or out of demand that is directly responded to by their academic departments. This ongoing program development strengthens NKU's commitment to P-12, and signifies the extent to which P-12 related work is embedded in the workload of many. It should be noted that over the 2006-2009 period faculty were involved annually in approximately 4-6,000 institutional level, P-12 engagement activities that served 40-50,000 community members.

College-level Readiness

KYOTE College Readiness Program

The KYOTE project is a multifaceted collaboration between NKU and local high schools that facilitates college readiness in mathematics. The nationally recognized collaboration links placement testing, transitional courses in area high schools and development of transitional course materials. A brief summary of the components follows:

- *Transitional Math Courses*
High schools participating in the NKU-based program require juniors who score below 19 on the mathematics section of the ACT to take a transitional algebra class. Ten (10) high schools participated in the 2008-09 academic year, and 18 have indicated they will participate in the 2009-10 academic year.
- *Transitional Course Development*
The Northern Kentucky Algebra Community and NKU faculty work together to build lessons to use in transitional courses in local schools and to share with other teachers in the region and state. NKU also works with high schools to help develop their own materials, homework exercises and tests as part of an ongoing partnership in place for more than a decade
- *KYOTE Placement Tests*
Northern administers two types of KYOTE tests developed by an NKU mathematics professor in collaboration with the University of Kentucky. Students at participating high schools who must complete a transitional math course (below 19 ACT) take the KYOTE College Readiness placement test. Students who pass the test are guaranteed placement in a credit-bearing mathematics class at Northern. Students who score between 19 and 21 on the ACT can take the College Algebra KYOTE. If they pass the test, they are guaranteed placement into a college algebra course if they enroll at NKU.
- *KYOTE Test Results*
The table below shows the result for the 2008-09 academic year. Nearly 50 percent of the students who took the College Readiness test achieved a passing grade. More than half who took the College Algebra test qualified for college-level algebra at NKU.

Results of testing for the 2009-10 academic year in other parts of the state are showing similar passing rates. Data from Northern Kentucky schools are not available yet because the testing occurs at the end of the school year.

KYOTE 2008-2009 Academic Year Test Results

<i>Test</i>	<i>Number Taken</i>	<i>Number Passed</i>	<i>Percentage Passed</i>
<i>College Readiness</i>	337	160	47
<i>College Algebra</i>	168	98	58
<i>Total</i>	505	258	51

KYOTE use expands as two community colleges in Kentucky are using the KYOTE tests based on the NKU model in high schools in their regions. The Elizabethtown Community College program serves 17 high school districts, the Owensboro Community College program, 14 districts. The KYOTE tests are one of the options under consideration for use in statewide placement testing.

Center for Integrative Science & Math (CINSAM)

The Center for Integrative Natural Sciences and Mathematics offers numerous outreach programs that impact college readiness. These programs target both STEM teachers and students. CINSAM has developed innovative and accessible curricula, teaching materials and lesson plans.

- *CINSAM Summer Camps*
CINSAM has developed a series of very effective summer camps for junior and senior high school students. These include Astronomy Camp, Emerging Technology Camp, English Language Learners Fun with Science Camp, Fun with Science Camp, Java Computing Camp, Math and Statistics Camp, Ohio River Ecology and Applied Research Camp.
- *CINSAM Night*
CINSAM sponsors a series of evening campus visits for area teachers (typically 200-250 a year) who gather for dinner, a presentation on environmental education, and attend “Alliance” breakout groups. These events support camaraderie among science teachers who are often isolated in smaller districts, and benefit throughout the year from an ongoing connection to CINSAM.

College of Education & Human Services

COEHS offers a series of programs designed to build student academic competencies at multiple grade levels. These include:

- *Advanced Placement Assistance*
At Beechwood High School, an NKU faculty member works with Language Arts students to help them with argumentative writing. The program also helped prepare the students for the Advanced Placement Language and Composition Exam.
- *Readers and Scribes*
Middle grades education students participate in this service learning project conducted at Newport Middle School. The program helps the K-12 students prepare for the Kentucky standardized tests.
- *Language Camp*
This 1-week camp for local students 10-17 coincides with the Intensive Summer Institute for World Language Teachers and enrolled 80 students in 2009.
- *Explore More*
Academically, creatively, and artistically gifted students from kindergarten through eighth grade participate in classes in science, mathematics, visual and performing arts, creativity, leadership and multidisciplinary studies. 125 students participate each semester.
- *The BEST Partnership*
The COEHS formed a BEST partnership with RA Jones Middle School in Boone County. NKU faculty and students participate in tutoring sessions and a career fair.
- *Dreamfest 2010*
The Talent Development and Gifted Studies faculty at NKU offer this enrichment program during NKU’s spring break week. 700 4th and 8th grade students have taken part in this program.

- *Leadership Conference*
This conference is for high school girls and focuses on developing leadership skills while exploring the college campus atmosphere. 200 students have taken part in this program.
- *World Cultures Camp*
This program provides an effective, instructional curriculum for high school students who will benefit from a fully, and more comprehensive understanding of world cultures. This program was initially funded by the Council for Postsecondary Education's Regional Stewardship Fund.

College of Arts & Sciences

CAS offers a number of programs designed to encourage college going and readiness. These programs include such activities as, campus visits, summer camps, art studio tours and discounted admission to plays and performances. Examples include:

- *Using Technology & the Environment to Entice Students into the Sciences*
This program offered in 2009, incorporated three scientific fields and applied research involving the proximate environment to significantly immerse students in scientific research and a deep understanding of environmental change over time. This program was initially funded by the Council for Postsecondary Education's Regional Stewardship Fund.

College of Informatics

COI has developed a variety of programs for both P-12 teachers and students. These include:

- *Innovative Technologies Camp*
This camp provided high school students who were interested in careers in informatics, intensive experiences in such areas of data security, mobile technology, Web 2.0, and hand held device, app programming. These camps were offered in collaboration with regional computing professional organizations.

Teacher Professional Development

NKU via its College of Education and Human Services, the Kentucky Center for Mathematics, the Center for Integrative Science and Mathematics, and several academic units, routinely offers professional develop programs from area teachers and administrators. These programs fill a void in the professional development that is available to teachers in their home districts. These programs cover a wide variety of academic disciplines, as well as test preparation.

CINSAM

The CINSAM outreach programs engage more than 1,000 teachers each year.

- *CINSAM "Southern Counties Program"*
This is a highly successful, 7 year old program serves the counties of Augusta, Bracken, Pendleton, Grant, Williamstown, and. The program assists teachers in fourth through eighth grades by modeling best practices for science education in the teacher's own classrooms. CINSAM is developing resource CDs and DVDs that will strengthen classroom learning.

- *CINSAM "River Cities Project"*
In Fall 2009 CINSAM instituted This mathematics preparatory program in the cities of Newport, Dayton, Ludlow and Silver Grove. A mathematics specialist currently is meeting with each school to define its needs and to work with teachers to address them. These districts are especially important as the University responds to the needs of the urban disadvantages in its service region,

Kentucky Center for Mathematics Professional Development

The KCM has developed a number of professional development programs that are critical to giving math teachers the skills and curricular support they need to adequately prepare students. Importantly, these programs are in place in 100 of the 120 Kentucky counties.

- *Intervention Programs*
The center trains teachers in primary schools how to diagnose deficiencies and adjust mathematics instruction as a result. Intervention programs have been implemented in approximately 120 schools, several of which are reporting impressive results as the following examples illustrate:
 - ❖ The number of students who scored proficient or distinguished on the No Child Left Behind assessment rose more than 20% from 58% in 2007 to 82% in 2009 for students in a third grade math intervention program in a Danville elementary school.
 - ❖ The number of students who scored proficient or distinguished on the Kentucky Core Content Test rose almost 40% from 38% in 2007 to 77% in 2009 at a Paris elementary school.
- *K-12 Coaching*
The center trains teachers to coach or mentor mathematics teachers in roughly 30 schools. In collaboration with the College of Education and Human Services, the collaboration received a NOYCE PRIME Grant and is working in partnership with Newport, Covington and Cincinnati schools to recruit, support and retain highly qualified high school mathematics teachers in high-need school districts.
- *Adult Education*
The center has trained about 150 adult education instructors who are preparing students for the GED.

College of Education and Human Services

The College of Education and Human Services is engaged in a wide variety of targeted, professional training programs designed to develop highly qualified teachers and enhance college readiness for area students. The College also offers a number of programs within local schools that increase the knowledge and skills students need to prepare for success in college.

- *Northern Kentucky Writing Project*
The writing project is part of a nationwide network of programs designed to advance the teaching of writing. NKU is one of eight sites in Kentucky. Teachers participate in a 4 week summer workshop with instruction on writing techniques and strategies for improving K-12 students' writing abilities. An NKU professor follows up with observations of the teachers in

action during the school year, giving them feedback and information to improve their teaching techniques. This program enrolls 30-50 teachers each year.

- *Kentucky Reading Project*
The reading project is modeled after the National Writing Project. Teachers participate in a 4 week summer workshop with instruction on reading techniques/strategies for improving K-12 students' reading abilities. An NKU professor follows up with observations of the teachers in action during the school year, giving them feedback and information to improve their teaching techniques. This program enrolls 30-50 teachers each year.
- *Center for Educator Excellence*
The center, housed in the COEHS at NKU, is an outgrowth of the Vision 2015 strategic plan for Northern Kentucky. It represents a collaboration involving NKU, Thomas More College, Gateway Community and Technical College, the Northern Kentucky Council of Partners, Northern Kentucky Cooperative for Educational Services, the Partnership for Successful Schools, the Education Alliance and 17 Northern Kentucky school districts. Activities range from establishment of Future Teacher of America organizations in high schools to preparation of teachers for National Board Certification. This program was initially funded by the Council for Postsecondary Education's Regional Stewardship Fund
- *Intensive Summer Institute for World Language Teachers*
NKU is the only Kentucky higher education institution that has developed a world languages summer intensive institute for individuals interested in certification in one of the following world languages: French, German, Spanish, Arabic, Chinese and Japanese. This program enrolls 15-20 teachers each year. As the result of this program approximately 30 teachers have been certified to teach a world language in Kentucky schools. The impact will increase as Kentucky moves to require all high school students to be proficient in a second language.
- *Center for Environmental Education*
The center sponsors several environmental education workshops for area teachers, focusing on the Kentucky Program of Studies for science education. The Center has also developed innovative approaches to developing STEM curricula. The Center served 80-100 teachers in 2009-10.
- *Field Experience*
Students in NKU teacher education programs participate in approximately 150 hours of practicum field experiences before they are assigned to student teaching. NKU student teachers fully participate as teachers, developing lesson and unit plans and analyzing student data to determine student learning.
- *Teacher as Leader*
The Master of Arts in Education program has evolved into a Teacher as Leader program, with emphasis in leadership development as outlined by the Kentucky EPSB. The foundation of this program is collaboration with the graduate students' K-12 school districts through the development of individualized professional growth plans. Graduate MAED students identify personal areas for improvement as teachers and/or leaders and then complete course work and field experiences designed to effect growth in the areas identified.

- *Future Educators of America (FEA) clubs*
NKU has helped to develop these clubs for area middle and high schools. NKU faculty and students attend various events throughout the region as a way to connect the K-12 students to a college campus.
- *FEA Workshop*
NKU faculty sponsor a day-long workshop for FEA high school students, who come to the NKU campus and participate in college classes, hear speakers, go on a campus tour, and interact with university students and professors.
- *Future Teachers of America Summer Camp*
NKU has hosted a Future Teachers of America 5-day residential summer camp for the past several summers. This camp has enrolled 15-20 students each year.
- *Early Childhood Education Program*
Early Childhood is a key component of the overall “roadmap” of college readiness. With support for the Council for Postsecondary Education’s Regional Stewardship Fund, NKU has embarked on building nationally recognized expertise in early childhood education. The focus of this work is several fold. First, to develop standards of care and professional development for early childhood centers and staff. Second, to build a outcomes assessment and database of early childhood performance metrics that will allow stakeholders to evaluate early childhood centers and establish empirical based standards of care.

Awareness Building

- *Community Connections*
One of the most fundamental, yet key ways to impact P-12 students’ college readiness is to bring them to campus for academic visits and to bring academic resources out to their schools. This is especially important for first time college students NKU’s Community Connection program provides these opportunities. These yearly activities include:
 - ❖ Norse Explores on campus day (5750 students)
 - ❖ Art Reach Concerts (Symphonic Winds, Chamber Orchestra, Jazz Ensemble)
 - ❖ Spirit Day visitation Program (5 grades)
 - ❖ Planetarium Scout Days on campus (5 Saturdays)
 - ❖ Anthropology Career Days

In addition, next year, selected faculty lectures will be video streamed into area high schools. The purpose here is to find creative ways to bring the resources of the University (i.e. lectures, lab demonstrations, art studios) into classroom via an NKU P-12 portal. The curricular resources that reside on the portal can augment teachers lesson plans, as well as create an NKU identity with students.

Academic Testing, Placement & Financial Support

One of the most important but often neglected components of college readiness is academic proficiency testing. Many times the use of standardized testing is not well understood, sporadically applied, or inconsistent across school districts. In addition, students often have significant anxiety and confusion over the link between testing, enrollment and program placement. To address these issues NKU has developed a number of programs. They include:

- *Measure of Academic Progress (MAP)*
NKU has facilitated the conversation and terms of use for the MAP assessment across the 18 school districts in its service area. While challenges remain in terms of full adoption across the districts, significant progress has been made whereby the majority of the 18 districts are now using this common assessment. The assessment offers tremendous value for college readiness in both identifying student deficiencies and responding with remedial curriculum. In order to accelerate use of the MAP test, NKU has included the use of MAP in its teacher preparation curriculum.
- *NKU Mandatory Placement Testing*
Beginning in the Fall of 2009, NKU instituted mandatory placement tests to ensure appropriate freshman placement. NKU requires placement testing for entering freshman and transfers with less than 24 college credits. NKU requires tests in three areas including, Mathematics (KYOTE), Writing (E-Compass), and Reading (Compass). These tests have facilitated greater levels of freshman enrollments, as well as more effective placements in credit bearing courses that lead to greater success in subsequent General Education courses.
- *ACT Test Prep*
The office of Community Connections offers very affordable and convenient courses in ACT test preparation. These courses have been proven to address student anxiety and test performance.

Early Enrollment Programs

- *School-based Scholars*
This program enables eligible high school juniors and seniors to enroll in NKU courses for college credit prior to high school graduation. Students can enroll in a maximum of 4 courses at their respective high schools.
Approximately 400 students enroll each year with a 30-42% enroll at NKU after high school.
- *Early Enrollment*
This program enables eligible high school juniors and seniors to take 1 NKU college course on the NKU Highland Heights campus prior to graduation. Approximately 40 students enroll in this program each year.
- *School-based Scholars 4+1 Program*
Beginning this Fall, eligible students will have the opportunity to enroll in 4 classes at their respective high schools and in 1 course on the Highland Heights campus at a cost of less than a single course.
- *Bridge Program : The NKU Academy*
This college readiness program offers a 5 week residential summer program for recent high school graduates who do not meet NKU's admission standards. Students who successfully complete remedial work in Math, Writing and Reading) can subsequently enroll in credit courses in the Fall. This program typically enrolls 45-50 students.
- *Bridge Program: NKU Rocks*
This program includes a 1 week summer institute available to all entering freshman with a special emphasis on first generation college students. The program focuses on both academic and social skills development.

Financial Support

- *The Northern Difference*

This program is a needs based grant program targeted to Kentucky residents who demonstrate financial need. The program funds the difference between the cost of attending NKU and the federal, state, and institutional grants awards normally available to students. The grant is renewable for up to 8 semesters (4 years) as long as recipients maintain a 2.5 GPOA, are full-time, and Pell Grant eligible.

STRIVE

For the past several years, NKU has been a partner in a very innovative and comprehensive educational transformation program known as STRIVE. This program extends geographically into the city of Cincinnati, as well as the river cities of Newport and Covington on the Kentucky side of the Ohio River. STRIVE's aspirational goals are in complete alignment with both Vision 2015 and NKU. President Votruba has co-chaired this initiative and remains a key voice and driver in STRIVE. Two NKU, STRIVE-related initiatives with the greatest impact on northern Kentucky include:

- *Newport/Covington Collaborative*

As a result of NKU's facilitation, the Newport and Covington school districts have begun to implement an innovative college readiness program. This program provides essential teacher training in college readiness assessments who full use and value is often neglected. These include individualized learning plans (ILPs), ACT EXPLORE and pre-ACT tests. The personnel for this initiative were supplied by STRIVE, with implementation and evaluation plans developed by NKU.

- *Urban District Preparedness Program*

The NKU College of Education & Human Services, in collaboration with other, regional Colleges of Education is developing a new teacher education curriculum designed to prepare new teachers for placements in urban school districts. Urban districts present a unique set of challenges new teachers, many who avoid these positions preferring to go outside of teaching until openings occur in suburban districts. The program being developed draws upon best-practice approaches from other cities and the strategies for drawing the most qualified teachers into urban settings.

- *STRIVE / NKU Promise Program*

This is a needs based grant program that targeted to students who are recent graduates from the river cities of Covington and Newport. Its goal is to remove the financial barriers that often challenge the academically prepared students from these urban areas. Eligible students receive a grant that covers tuition, fees, and a book allowance. It is renewable for up to eight semesters (4 years) as long as recipients maintain a 2.5 GPA, are full-time and Pell Grant eligible.

Regional P-12 Organizations

The northern Kentucky region is home to several well-functioning P-12 collaboratives whose missions align with NKU's goals of college readiness, student persistence, and teacher preparation. The Dean of the College of Education & Human Services, along with the Provost and Associate Provost take an active role in the governance and programmatic development associated with these organizations. These organizations provide alignment and access across the region's 18 school

districts, and provide a forum for the determination of innovative responses to shared problems. The key collaborative organizations include:

- *Northern Kentucky Education Council (NKEC)*
In spring of 2008, Vision 2015 convened a meeting with thirteen different education-related groups to discuss how potential collaboration would create more efficient and effective support of the full range of educational endeavors in northern Kentucky. Further meetings were convened, and the group decided to focus its efforts on aligning the work and membership of three previously independent groups: 1) the Northern Kentucky Education Alliance, 2) the Northern Kentucky Council of Partners in Education, and 3) the Vision 2015 Education Implementation Team. The NKEC has equal representation from educators, businesses leaders and community members and has adopted six education goals identified in the Vision 2015 plan as the framework for moving forward. Action teams have been formed around the goals and data plans are in process. The NKY Education Council officially opened on July 1, 2010. This collaborative structure represent a significant accomplishment for the region and will greatly facilitate access to multiple P-16 stakeholders and the development and assessment of new educational programs and initiatives.
- *Northern Kentucky Cooperative for Educational Services*
The Northern Kentucky Cooperative includes all of the 18 school districts within the 9 county northern Kentucky region. Access to all 18 districts facilitates the development of new NKU programs and initiatives such as the MAP testing effort. The Coop also offers NKU important opportunities to provide teacher and administrative professional development, especially those that support early testing and academic skills development.

Conclusion

NKU offers a wide variety of P-12 initiatives that are collectively designed to prepare students for college admission and academic success. These initiatives stretch across the educational spectrum from early childhood, through K-12. They come from a wide variety of academic disciplines including the sciences and arts. Many of these programs are designed for first generation college students and those from more rural areas who have a limited experience with a university campus. The breadth of NKU's programs represent the institutional commitment to regional stewardship. P-12 is the centerpiece of this commitment. When programs are evaluated or created the question most often asked is, "How can P-12 be brought into this effort"? Finding ways to make this important connection are not difficult. Answering these questions recognizes that NKU's future is intimately tied to the health of the P-12 system.

Appendix I. Nine County Northern Kentucky Service Region
Educational Rates (2010 Census Estimates)

	High School Grad 25+, 2000	Bachelors Degree 25+, 2000
Boone Co.	85.10%	9.50%
Bracken Co.	69.60%	9.50%
Campbell Co.	80.80%	20.50%
Carroll Co.	68.10%	8.30%
Gallatin Co.	68.00%	6.90%
Grant Co.	72.40%	9.40%
Kenton Co.	82.10%	22.90%
Mason Co.	73.30%	14.40%
Owen Co.	67.90%	9.10%
KENTUCKY	74.10%	17.10%
USA	80.40%	24.40%

